 **Grainy Kids Challenge**

Year 7-­8 Technology (Mandatory)

**Component 1 – Food product development**

Focus area: **Products**

Design specialisation: **Food design**

Technologies: **Food**

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**Design Brief**

Your task is to design and produce a grain based food product for teenagers that can be sold in the school canteen. You must describe the development of the food product by documenting its progress in an electronic portfolio. You must provide evidence that the food product has been thoroughly tested and changed to suit the needs of the target audience. It must:

1. be suitable for breakfast, recess or lunch
2. contribute to the recommended serves per day of grain based foods
3. fall within the recommendations of the Australian Dietary Guidelines for Children and Adolescents and the Fresh Tastes @ School NSW Healthy School Canteen Strategy criteria, ensuring that the final product would not be deemed an ‘Occasional’ RED food.
4. appeal to the target audience, that is teenagers at school
5. include a nutrition panel
6. fit into the cost and time constraints for the canteen.

Record all the processes of designing in this electronic portfolio.

The portfolio can be submitted for judging by 25 September 2013.

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| --- |
| Things to record:  **Describe the food product to be designed.** |
| **Who will use the product and what will it be used for?**  **Identify the specifications for the final design.**  **Create a mind map of the materials, tools and techniques you will need to complete the Grainy Kids Challenge.**  **Identify the resources available for you to use to complete the project.** |
| **Timeline**  This project commenced on (date)  The project must be completed by (date)  Resources need to be identified by (date)  Project will be ready for testing by (date)  Testing completed and product ready for use by (date) |

Things to record:

**What are the major food nutrients?**

**What are the main properties of those nutrients?**

**What is the message promoted in the tools for food selection?**

**Where in the tools for food selection do grains feature? Describe reasons for this.**

**What did you learn from comparing the “Healthy Diet for a Teen” to your own diet?**

**How did you learn to work safely in a food preparation environment?**

## Criteria for success

List the criteria for success in the left column and the method you plan to use to test it in the right column.

|  |  |
| --- | --- |
| **Criteria** | **How it can be tested** |
|  |  |
|  |  |
|  |  |
|  |  |

Things to record:

**What is the NSW Healthy Canteen Strategy?**

**Create a table of GREEN/AMBER/ RED foods on your school canteen menu.**

**Does your school canteen menu contain foods that follow the recommendations of the Australian Guide to Healthy Eating (including grain foods)?**

**Does your school canteen menu contain foods that follow the recommendations of GREEN/AMBER/RED foods in the Healthy School Canteen Strategy?**

**Debate in class the following statement: “The school canteen models healthy food choices that are tasty, interesting and affordable”. Which side are you on and why?**

**What are grains and grain based foods?**

**What is a ‘serve’ of grain based foods?**

**How many serves are recommended each day for good health?**

**Why are grain based foods an important part of a healthy diet?**

**What are the elements of an effective recipe?**

**Market research:**

**What does the canteen staff believe the students preferences are for food sold in the canteen?**

**What do students believe the preferences are for food sold in the canteen?**

**Identify the types of food, cost, portion size, storage and packaging of foods sold in the canteen.**

**Generating ideas:**

**Generate four ideas and evaluate each idea in terms of meeting the criteria for success.**

**Identify the top two choices and justify each.**

**Create recipes for the two selections.**

**RECIPE SAMPLE**

**Jam & Sultana Scrolls**

|  |  |  |
| --- | --- | --- |
| **Preparation time: 15 mins** | **Cooking time: 15 mins** | **Serves: 12 (makes 12)** |



**Ingredients:**

2 cups wholemeal self-raising flour

90ml olive oil or 90g olive oil margarine

½ to 2/3 cup low fat milk

¼ cup of jam (e.g. strawberry, plum, raspberry etc…)

1 T brown sugar

½ cup sultanas

**Nutrition Information**

| *per serve* | |
| --- | --- |
| **Energy** | 752kJ |
| **Protein** | 3g |
| **Fat, total - saturated** | 8g  1g |
| **Carbohydrates  - sugars** | 24g  12g |
| **Dietary Fibre** | 3g |
| **Sodium** | 143mg |

**Method:**

1. Preheat oven to 180°C.
2. Place flour and oil/margarine in a bowl. Rub together with fingers until it feels like breadcrumbs. Slowly add milk until a dough forms.
3. Roll dough out onto a floured surface until it is about 2cm thick and forms a rectangle. Spread with jam and sprinkle with brown sugar and sultanas.
4. Roll dough into a cylinder shape. Cut into rounds of about 2cm thick and arrange flat on a tray lined with baking paper. Bake for 12-15 minutes. Remove from oven and allow to cool. Enjoy!

**Variations:**  These scrolls can easily be made into savoury scrolls by replacing the sweet filling with a savoury filling, such as Vegemite and grated cheese. The kids will love them!

**IDEA 1**

**[Insert Name of Recipe Here]**

|  |  |  |
| --- | --- | --- |
| **Preparation time:** | **Cooking time:** | **Serves:** |

Paste/Insert photograph of food product over this space

Image should be **no smaller** than this space and be clear and of **good quality (300dpi)**

**Ingredients:**

To be listed in order as they appear in the methods.

**Nutrition Information**

| *per serve* | |
| --- | --- |
| **Energy** | kJ |
| **Protein** | g |
| **Fat, total - saturated** | g  g |
| **Carbohydrates  - sugars** | g  g |
| **Dietary Fibre** | g |
| **Sodium** | mg |

**Method:**

**Tips:**

**Variations:**

**IDEA 2**

**[Insert Name of Recipe Here]**

|  |  |  |
| --- | --- | --- |
| **Preparation time:** | **Cooking time:** | **Serves:** |

Paste/Insert photograph of food product over this space

Image should be **no smaller** than this space and be clear and of **good quality (300dpi)**

**Ingredients:**

To be listed in order as they appear in the methods.

**Nutrition Information**

| *per serve* | |
| --- | --- |
| **Energy** | kJ |
| **Protein** | g |
| **Fat, total - saturated** | g  g |
| **Carbohydrates  - sugars** | g  g |
| **Dietary Fibre** | g |
| **Sodium** | mg |

**Method:**

**Tips:**

**Variations:**

## Costing

Use this spreadsheet to calculate a cost estimate and actual costs.



Insert page break here for more pages in *Generating and developing ideas.*

Things to record:

**Produce the two recipes. Include photos of your group’s practical work.**

**Your group and peers complete a sensory evaluation of the recipe items.**

**Evaluate the food items in terms of the Grainy Kids Challenge criteria.**

**Modify your recipes to better meet the criteria based on the evaluation results.**

**Which food product best meets the criteria and why?**

**Justify how the final food product meets the nutritional requirements in the challenge criteria.**

**Evaluate the final product after conducting the trial of the product and the questionnaire from the school community. Include photos of your group presentation.**

**Complete the final recipe template.**

**FINAL RECIPE TEMPLATE**

**[Insert Name of Recipe Here]**

|  |  |  |
| --- | --- | --- |
| **Preparation time:** | **Cooking time:** | **Serves:** |

Paste/Insert photograph of food product over this space

Image should be **no smaller** than this space and be clear and of **good quality (300dpi)**

**Ingredients:**

To be listed in order as they appear in the methods.

**Nutrition Information**

| *per serve* | |
| --- | --- |
| **Energy** | kJ |
| **Protein** | g |
| **Fat, total - saturated** | g  g |
| **Carbohydrates  - sugars** | g  g |
| **Dietary Fibre** | g |
| **Sodium** | mg |

**Method:**

**Tips:**

**Variations:**

Insert page break here for more pages in *Producing solutions.*

Copy the data from the *Criteria for success* that you created in *Exploring and defining the task* and paste it in here. Use the additional column to indicate whether each criterion was met.

|  |  |  |
| --- | --- | --- |
| **Criteria** | **How it can be tested** | **Successfully meets criteria?** |
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|  |  |  |
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Things to record:

**To what degree has the food product designed met the criteria for success?**

**What were some of the challenges you encountered and how did you deal with them?**

**What were some examples of problem solving?**

**Describe areas of strength and weakness in the design and the group’s performance.**